Louisiana Morbidity Report

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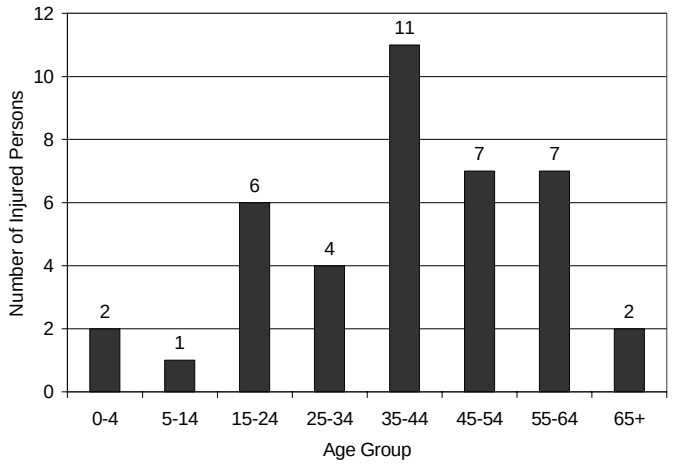
July-August 2000 **Volume 11 Number 4**

Tornado-Related Injuries

On Wednesday, March 15, 2000, a series of tornadoes touched down in Houma, Louisiana beginning at approximately 2:00 PM. There were 40 people with tornado-related injuries. Thirty-five people had injuries that occurred immediately following the tornado. The remaining had injuries that occurred within the week following the tornado as a result of clean-up efforts related to the tornado.

Nineteen white females (49%) acquired tornado-related injuries, compared to 10 white males (26%), 4 black females (10%), and 6 black males (15%). Gender and race was unknown in one case. The majority (N=35, 88%) of these tornado-related injuries occurred among 15- to 64-year olds (Figure 1). There were only 5 injuries among persons under 15 years of age or over 64 years of age.

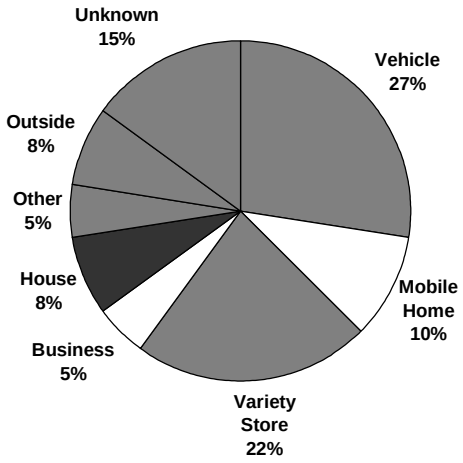
Figure 1: Tornado-related injuries by age group, Louisiana, March, 2000



Contents

Over one-quarter (N=11, 27%) of these injuries occurred in vehicles (Figure 2). The next greatest number of injuries (N=9, 22%) occurred in a local variety store which was located in a strip mall. Ten percent (N=4) of persons were injured inside a mobile home. The remaining persons were injured in another local place of business (N=2, 5%), inside a home (N=3, 8%), and outside (N=3, 8%). The place of injury was unknown or not specified in the remaining 8 cases (20%).

Figure 2: Place of tornado-related injury, Louisiana, March, 2000



Among the 40 persons injured, there were 51 total tornado-related injuries treated in emergency departments (Figure 3). Twenty-nine percent (N=15) of the tornado-related injuries consisted of contusions and abrasions, while 27 percent (N=14) were musculoskeletal pains or strains. Twenty-four percent (N=12) of injuries resulted in a laceration, while 10 percent (N=5) of the injured persons sustained a fracture. Six percent (N=3) of persons experienced anxiety due to the tornado.

Fifteen of the 40 patients were transported to the hospital via an ambulance service and the remaining 25 patients arrived by private vehicle. The time the patient first presented to the emergency department and the time of discharge were noted on 28 of the 35 charts. Time spent in the emergency department ranged from 39 minutes to 5 hours. The average time spent in the emergency department by patients injured from the tornado was 1 hour and 55 minutes.

Information on these injuries was collected by local and state Office of Public Health personnel with the cooperation of hospital administrators, emergency department nurse supervisors, medical records department directors and other key hospital personnel.

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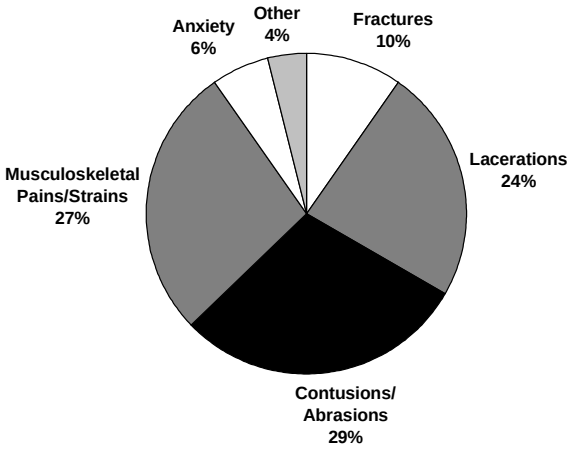
Figure 3: Tornado-related injuries by type of injury, Louisiana, March, 2000



Recommendations:

Educate the public about the dangers of being in a vehicle during a tornado. Urge public to use weather warnings as a signal to get to a safe place.

Recommend that emergency response systems develop plans to handle the transport of mass numbers of people and to inform emergency departments of the severity of the crisis and estimates of injuries that will be arriving.

Emphasize the importance of a statewide emergency preparedness plan. Region III's response was excellent, other regions may want to address their ability to deal with similar situations.

Contact all emergency rooms statewide and provide information regarding the importance and the procedure for reporting injuries and illnesses to the Office of Public Health during times of crisis.

Sociodemographic Characteristics of a High Risk WIC Population

In 1998 a survey of caretakers was conducted to evaluate WIC pediatric patients at high nutrition risk (as selected by the CDC Pediatric Nutrition Surveillance System (PedNSS)). A total of 297 questionnaires were completed. Respondents were from 20 different WIC clinic sites in five regions in Louisiana, Regions 1 (New Orleans area), 4 (Lafayette area), 5 (Lake Charles area), 6 (Alexandria area), and 7 (Shreveport area). Seventy-six percent of the participants lived in urban areas and 26% lived in public housing. Fifteen percent of respondents were Caucasian, and 84% were Black. Half the children were males and half were females. Seventeen percent of the children were born prematurely. Sixty-one percent of this pediatric population lived in single parent households primarily headed by single women. Seven percent of the children lived with four or more siblings and 36.5% lived in households containing five or more people. Living conditions were adequate as over 98% of the population had working toilets, running water, and a working stove and refrigerator.

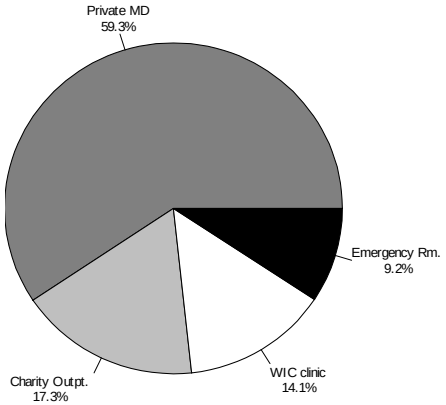
Fifty-nine percent of respondents used the services of a private MD, followed by the Charity outpatient clinics (17.3%), the WIC clinics (14.1%), and the emergency room (9.2%) (Figure 1). Sixty-four percent of the respondents had Medicaid, 15.8% had no medical insurance, 15.4% had a traditional medical insurance plan, and 4.3% used an HMO.

Forty-six percent of the respondents lived under one mile from the nearest grocery store, 43.4% lived between one to five miles, 9.1% lived between 6 and 15 miles, and 1.2% lived between 15 and 25 miles from the nearest grocery store. Twenty-four percent depended on people from outside the household to take them to the grocery store, while 23% depended on public transportation to obtain their food supplies. Five percent did not have access to public transportation.

The Food Security Hunger Core questionnaire was developed by the USDA to identify the severity of food insecurity and hunger in U.S. households. A household identified as food insecure did not have access to enough food to fully meet basic needs at all times. In this WIC population at high nutrition risk, 69% of the children were food secure and 31% were food insecure (Figure 2). From the food insecure population, 72% were food insecure without hunger, 23% had moderate hunger, and 5% had severe hunger.

The WIC program provides both a food package and nutrition counseling. The goal is to improve pregnancy outcomes as well as the physical and mental development of infants and children. This

Figure 1: Source of medical care for at-high-risk WIC respondents, Louisiana, 1998



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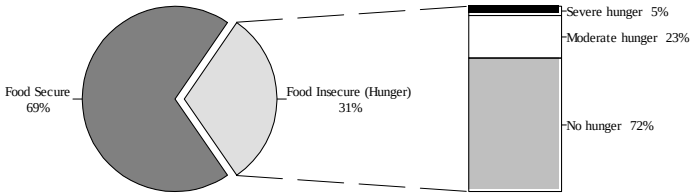
survey has helped to identify the characteristics and needs of those WIC participants most in need of supplementary professional nutrition guidance and follow-up.

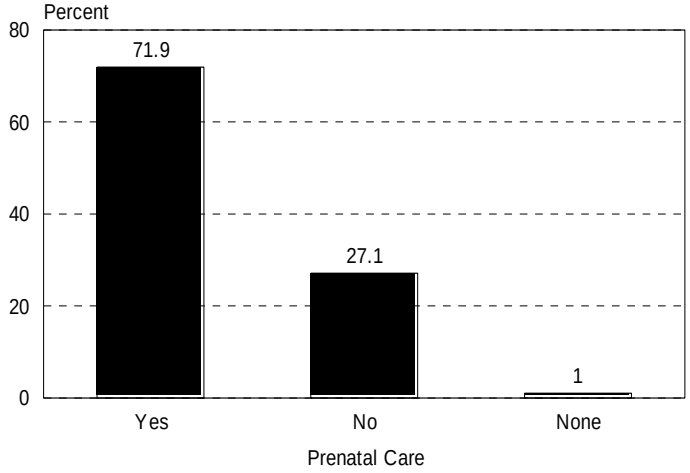
Figure 2: Food security of at-high-risk WIC respondents, Louisiana, 1998



Prenatal Care in Louisiana

According to the LaPRAMS 1998 data, 72% of pregnant women sought prenatal care (PNC) in their first trimester and 27% of the women reported entering PNC at or after 13 weeks; 1% reported not receiving any PNC throughout pregnancy (Figure 1). Overall, 75% of women claimed they received prenatal care as early as they wanted. Prenatal care (PNC) is defined in the LaPRAMS survey as visits to a doctor, nurse, or other health care worker to get check-ups and advice about pregnancy before the baby is born.

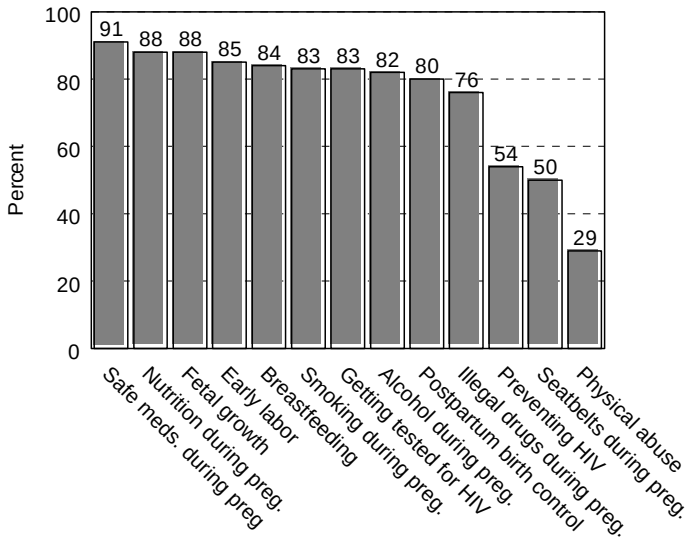
Figure 1: Initiation of prenatal care during first trimester, Louisiana, 1998



Among the different sites providing PNC, women are more likely to frequent a private doctor's office (69%) or a hospital clinic (17%). The remaining 14% seek care at a health department/parish unit, a primary care clinic/community health center, state hospital or another caregiver type.

To assess the nature of the PNC visits, the woman was asked to answer "yes" or "no" to thirteen different topics for the question: *During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below?* The most common topic discussed was safe medications to take during pregnancy, with 91% of women answering "yes" on their survey (Figure 2). Other topics discussed often were: nutrition, fetal growth, early labor, breastfeeding, smoking, HIV testing, alcohol use, and postpartum birth control. Illegal drug use, HIV prevention, and seatbelt use were also mentioned, but much less than the preceding topics. The health professional is least likely, according to the pregnant women, to talk about physical abuse (only 29% reported this as part of their PNC visit). Note: in 1998, 6.7% of Louisiana women reported being physically abused during their pregnancies. PNC visits are highly sought, with almost 100% of Louisiana's women seeking care at some time during their pregnancy.

Figure 2: Percent of women receiving information during PNC visits, by topic, Louisiana, 1998



The Louisiana Pregnancy Risk Assessment Monitoring System (LaPRAMS) is an on-going, population-based surveillance system that surveys women who have recently given birth in Louisiana to determine behavioral risk factors associated with pregnancy. Each month approximately 200 women who have recently given birth in Louisiana are selected at random from birth certificate files. The sample size of 2,421 mothers represents 3.7% of the 65,006 live births reported in the state in 1998. The sample for the PRAMS Survey is drawn from four strata: rural or urban residence and categories of birth weight (normal birth weight $\geq$2500g, low birth weight, 1500-2499g, and very low birth weight <1500g) as recorded on the birth certificate. All mothers that have delivered a very low birth weight baby are included in the sample.

The goal of LaPRAMS is to provide information needed to improve the health of mothers and babies and to reduce the number of infant deaths in Louisiana.

For further information contact Suzanne Kim at LaPRAMS, (504) 568-7729.

Hemophilia Surveillance

There were 331 cases of hemophilia in 1998 in Louisiana. Figure 1 demonstrates the breakdown into severity of disease by type (either hemophilia A (factor VIII deficiency) or hemophilia B (factor IX deficiency)). The amount of bleeding in a patient de-

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pends upon the severity of the deficiency. Normal blood levels of factor VIII and IX are from 50-150%. Those with less than 1% have severe hemophilia and experience frequent, painful bleeding episodes, especially into joints. Those with 1–5% have moderate hemophilia, will experience bleeding after minor trauma, but will generally not have spontaneous bleeding. Those with greater than 5% will bleed only after moderate trauma or surgery. Of the 331 cases in Louisiana in 1998, 154 (47%) had the severe form of hemophilia, 63 (19%) had moderate, and 114 (34%) had mild hemophilia. There were four times as many severe hemophilia A cases as hemophilia B cases. Moderate cases were almost equal between the two forms, and there were approximately three times as many mild hemophilia A cases as B cases.

Figure 1: Distribution of hemophilia patients by severity by type, Louisiana, 1998

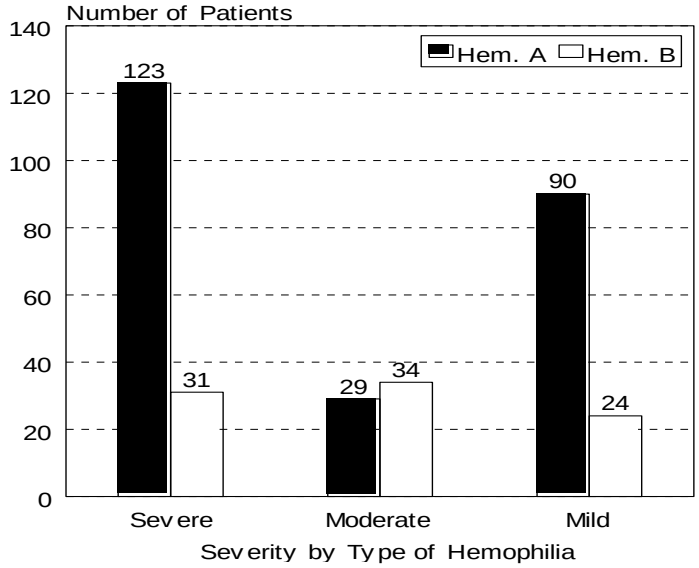
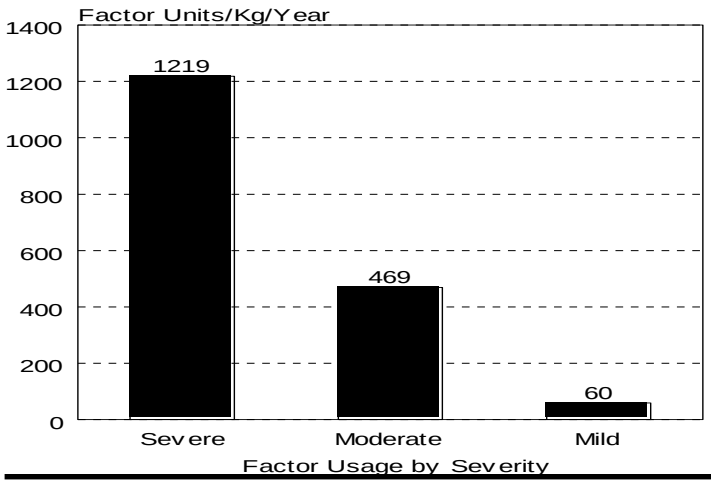


Figure 2 shows the consumption of therapeutic clotting factor concentrates (administered in units) per kilogram of body weight by severity of hemophilia. The average amount of factor concentrate used by the 154 patients with severe hemophilia was 1,219 units per kilogram, more than twice as much as the average used by patients with moderate disease and more than ten times as much as was used by those with mild disease. These clotting factor concentrates are both extremely effective and enormously costly. Covering the significant cost of these clotting factor concentrates has become a major concern to patients, medical caregivers, and for the Hemophilia Program at OPH. Over ninety percent of severe patients had third party coverage, either medicaid, medicare, private insurance or state assisted high risk pool insurance. With moderate hemophilia, the coverage fell to 80%, and with mild hemophilia the coverage fell to 66%, both of these drops largely explained by the falling rates of medicaid coverage in the latter two groups.

Figure 2: Clotting factor usage by severity, Louisiana, 1998



Region 1 (New Orleans area) had the most cases of hemophilia, followed by Regions 2 (Baton Rouge area), 3 (Houma/Thibodaux area), and 9 (Hammond/Slidell area). The high number of hemophilia cases in Region 3 is attributed to the geographic distribution of Houma Indian people. The high number of cases in Region 9 is attributed to two large families that live in that area.

Hemophilia became a reportable condition in Louisiana in 1993. The Office of Public Health has operated the Louisiana Hemophilia Program since 1978. Its mission is to ensure that medical care for patients is not compromised by the high cost of care for this disease. For more information please call the Hemophilia Program at (504) 568-5043.

Infectious Disease Epidemiology Says Good-bye to Two Valuable Employees

Barbara Trahan retired on June 30, 2000 after twenty years of service with the Office of Public Health. Barbara began her public health career working with a cancer case control study in 1980. She later worked as a field epidemiologist in Environmental Epidemiology and in 1985 became the HIV/AIDS program administrator. Barbara also served as program manager for the HIV/AIDS community based nonprofit organizations. In this position she traveled across the state teaching and training volunteers in HIV counseling and testing. In 1997 Barbara left the HIV/AIDS Section to join the Infectious Disease Epidemiology program where she served as the Rapid Response Team Coordinator, the Epidemiology Education Coordinator, and Co-Editor of the Louisiana Morbidity Report and the Infectious Disease Annual Summary Report.

Dr. Tom Farley's departure from Office of Public Health in mid-July to become Chair of Community Health Sciences at Tulane School of Public Health and Tropical Medicine was a great loss for DHH/OPH. Tom was trained in epidemiology by the Centers for Disease Control and Prevention and has worked in communicable disease control programs at the Louisiana Office of Public Health and served as Medical Consultant for the Infectious Disease Epidemiology Section since 1989. He was Medical Director of the Immunization and Tuberculosis Programs from 1989- 1991, served as Medical Director of the STD Control Program since 1991and as Medical Director of the HIV/AIDS Program since 1993. While serving as Medical Director of STD he guided project activities that helped to reduce the syphilis rates to an historic low in Louisiana.

HIV/AIDS Update

Profile of the Epidemic, 1999

In Louisiana, as in the rest of the US, the widespread use of new HIV treatments has continued to slow the progression from HIV infection to AIDS and from AIDS to death for many HIV-infected people. These developments have resulted in a decline in the number of AIDS cases and AIDS-related deaths in Louisiana (Figure 1). The steep declines seen between 1995 and 1997 that coincided with the introduction of new treatments, however, appear to be leveling off in the last two years. With this declining mortality, many HIV-infected individuals are living longer, healthier lives. Consequently, more persons than ever are living with HIV in Louisiana (Figure 2), pointing to the increased need for both treatment services and the prevention of further transmission.

Figure 1: AIDS case trends, Louisiana, 1990-1999

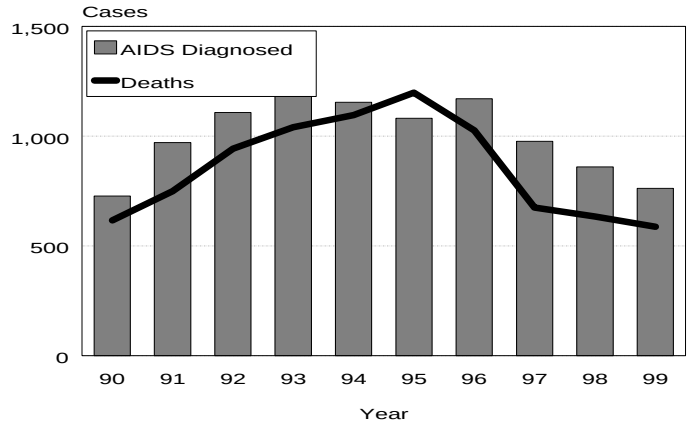
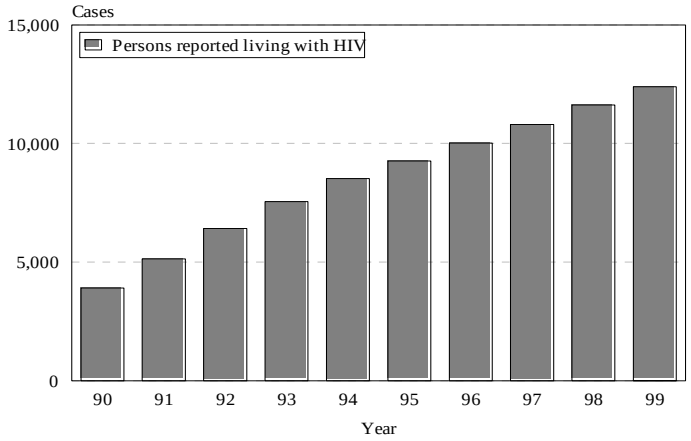


Figure 2: Persons reported living with HIV in Louisiana, 1990-1999



The risk behaviors associated with HIV transmission differ greatly according to race and sex. Among whites, the number of cases in men who have sex with men (MSM) continues to decline dramatically (Figure 3). HIV infections among white injecting drug users (IDU) and high-risk heterosexuals (HRH) remain low and relatively stable. Among African-Americans, such dramatic declines in new cases have not been observed in any risk group, while HRH has emerged as the leading exposure category (Figure 4).

Although HIV disease affects men and women of all ethnic groups, the epidemic has been shifting toward women and minority populations (Figure 5). While HIV/AIDS case rates are declining for men, case rates among women do not show the same decreases. African-American men continue to have a case rate roughly four times that of white men.

With effective treatments available, offering HIV testing to persons at risk and providing prompt access to appropriate treatments may reduce the spread of HIV to others at risk. Additionally, because these treatment advances have increased the life expectancy of people living with HIV, promoting long-term behavioral modification has become more critical than ever as an HIV prevention strategy.

Figure 3: Trends in risk behaviors in whites

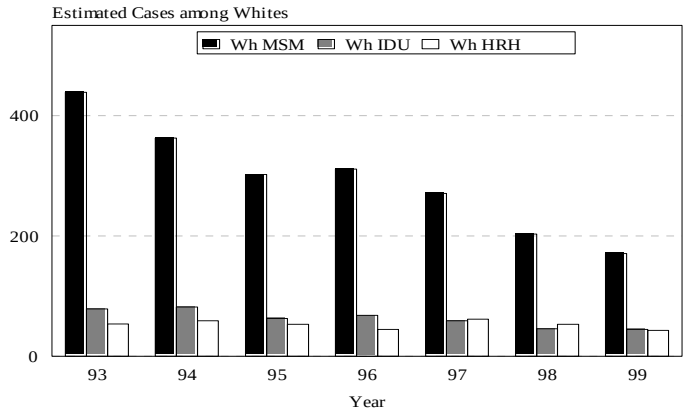


Figure 4: Trends in risk behaviors in African-Americans

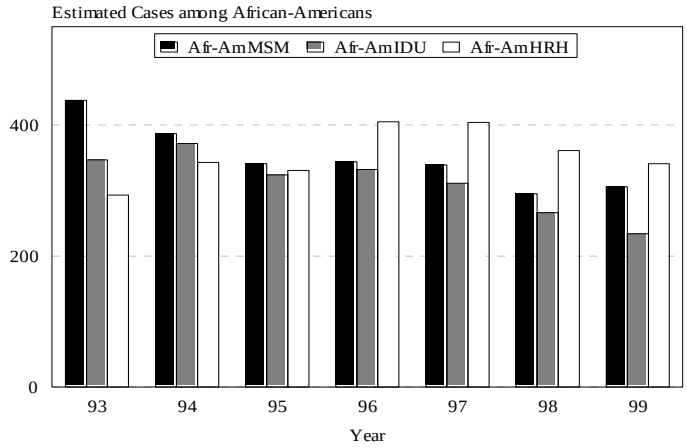
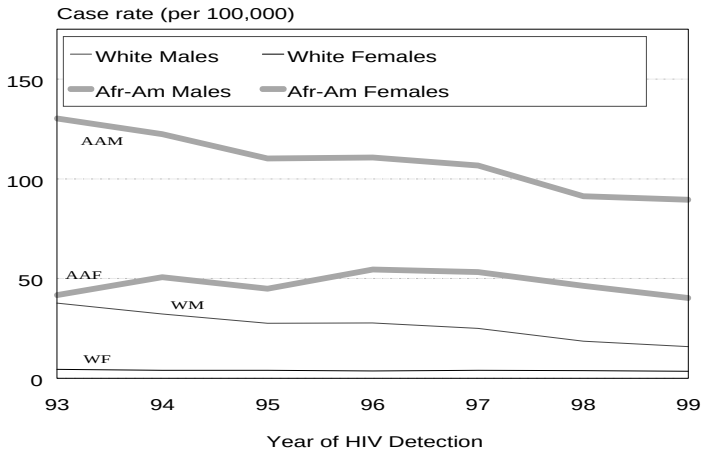


Figure 5: HIV/AIDS rates by race and sex



LOUISIANA COMMUNICABLE DISEASE SURVEILLANCE
May - June, 2000
PROVISIONAL DATA
Table 1. Disease Incidence by Region and Time Period

HEALTH REGION TIME PERIOD

DISEASE		1	2	3	4	5	6	7	8	9	May-Jun 2000	May-Jun 1999	Jan-Jun Cum 2000	Jan-Jun Cum 1999	% Chg
Vaccine-preventable															
H. influenzae (type B)		0	0	0	0	0	0	0	0	0	0	0	0	0	-
Hepatitis B	Cases	12	0	0	1	0	0	0	0	1	17	31	68	84	-19
	Rate[1]	1.2	-	-	0.2	-	-	-	-	0.3	0.4	0.7	1.6	2.0	
Measles		0	0	0	0	0	0	0	0	0	0	0	0	0	-
Mumps		0	0	0	0	0	0	0	0	0	0	1	3	3	-
Rubella		0	0	0	0	0	0	0	0	0	0	0	1	0	-
Pertussis		0	0	0	0	0	1	1	0	0	2	0	6	3	+100
Sexually-transmitted															
HIV/AIDS	Cases[2]	46	25	5	16	3	7	7	10	10	129	179	440	638	-31
	Rate[1]	4.6	4.3	1.3	3.0	0.7	2.5	2.3	2.0	2.9	3	4.2	10.2	14.8	
Gonorrhea	Cases	634	318	91	158	82	62	463	201	168	2135	2012	6361	6169	+3.1
	Rate[1]	61.0	56.0	24.1	30.6	30.6	20.3	91.5	57.3	43.6	50.6	47.7	150.7	146.2	
Syphilis (P&S)	Cases	1	4	2	16	1	0	1	0	0	25	48	95	128	-25.8
	Rate[1]	0.1	0.7	0.5	3.1	0.4	-	0.2	-	-	0.6	1.1	2.3	3.0	
Enteric															
Campylobacter		3	0	0	0	0	0	0	1	5	10	22	44	60	-26.7
Hepatitis A	Cases	7	1	0	2	0	0	0	0	0	11	26	38	70	-45.7
	Rate[1]	0.70	0.20	-	0.40	-	-	-	-	-	0.3	0.6	0.9	1.6	
Salmonella	Cases	11	3	3	3	2	1	4	3	4	37	98	114	171	-33.3
	Rate[1]	1.1	0.5	0.8	0.6	0.7	0.3	0.8	0.9	1	0.9	2.3	2.6	4.0	
Shigella	Cases	11	2	2	0	0	0	1	1	0	17	20	87	70	+24.3
	Rate[1]	1.1	0.4	0.5	-	-	-	0.2	0.3	-	0.4	0.5	2.0	1.6	
Vibrio cholera		0	0	0	1	0	0	0	0	0	1	0	3	1	+200
Vibrio, other		9	1	2	1	0	0	0	0	0	13	5	15	30	-50
Other															
H. influenzae (other)		0	0	0	0	0	0	0	0	0	0	3	6	9	-33.3
N. Meningitidis		0	0	0	0	0	0	0	0	0	0	7	26	34	-23.5
Tuberculosis		23	3	1	4	2	1	6	4	0	44	36	122	124	-1.6

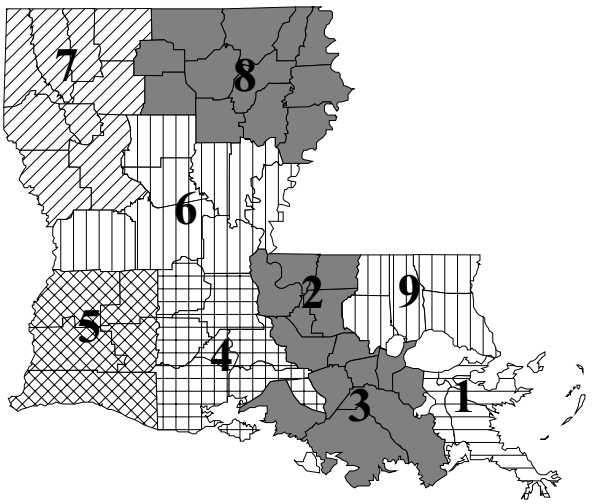
1 = Cases Per 100,000 2 = These totals reflect cumulative totals of HIV+ and AIDS cases.

Table 2. Diseases of Low Frequency

Disease	Total to Date
E. coli o157:H7	5
Lead Toxicity	1
Legionellosis	4
Lyme Disease	1
Malaria	3
Rabies	3
Varicella	77

Table 3. Animal Rabies (May - June, 2000)

Parish	No. Cases	Species
No rabies reports for this period		



ANNUAL SUMMARY

Shigellosis - 1999

Two hundred and twenty-seven cases of shigellosis were reported in 1999, a decrease of 42% when compared to the number of cases reported in 1998 (Figure 1). The sex-race specific rates were highest among Black males and females (8.3 per 100,000 and 5.9 per 100,000, respectively) compared to White males and females (1.5 per 100,000 and 2.4 per 100,000, respectively. Sixty-two percent of the cases occurred in age groups less than ten years (Figure 2). The onset of shigella cases appeared to be evenly spread throughout the year. One hundred twenty-nine (57%) of the reported cases occurred between June and November. Region One (New Orleans area) had the highest number of cases reported (54) followed by Region Two (Baton Rouge area) with 51 cases reported. East Baton Rouge, Orleans, and Jefferson parishes accounted for 44% of the reported cases (Figure 3). Serotyping was performed on 201 (89%) shigella isolates of which 75% were identified as *S. sonnei* and 2% were *S. flexneri.* Among those with reported risk information (44%), eight cases attended daycare and one case was reported to be a food handler. No deaths or outbreaks associated with Shigella were reported in 1999.

Shigellosis is an acute bacterial disease that is primarily transmitted through direct or indirect fecal-oral transmission. It is particularly common and causes recurrent infections in settings where hygiene is poor. With an incubation period of 1 to 3 days, people infected with shigella can experience diarrhea (which is often bloody), fever, and stomach cramps. A diagnosis of Shigella is confirmed by isolating the bacterium from a stool sample. The vast majority of cases are self limiting; however, approximately 3% of persons infected with *S. flexneri* will later develop pains in their joints, irritation of the eyes, and painful urination, a condition called Reiter's syndrome. Shigellosis can be treated with the following antibiotics: ampicillin, trimethoprim/sulfamethoxazole, nalidixic acid, or ciprofloxacin. Due to antibiotic resistant strains of *Shigella*, persons with mild cases should be allowed to recover without antibiotic treatment. Careful hand washing with soap and water is the most important means of preventing the spread of shigellosis.

Figure 1: Cases of shigellosis in Louisiana, 1990-1999

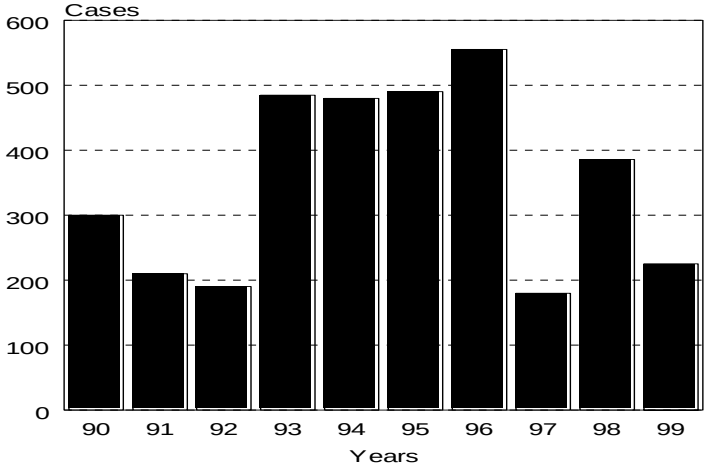


Figure 2: Cases of shigellosis by age group and sex in Louisiana, 1999

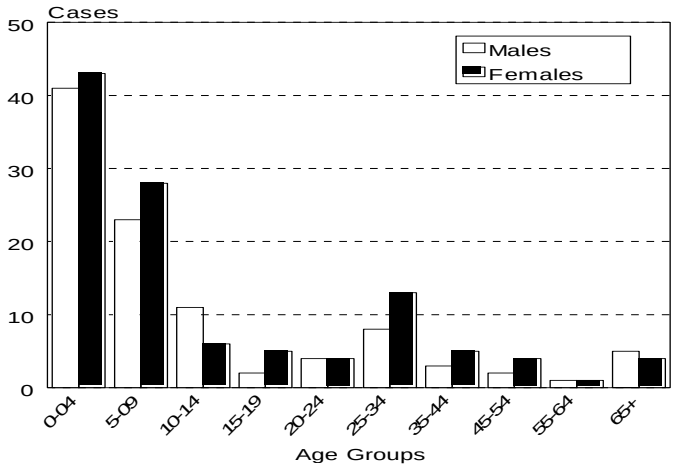
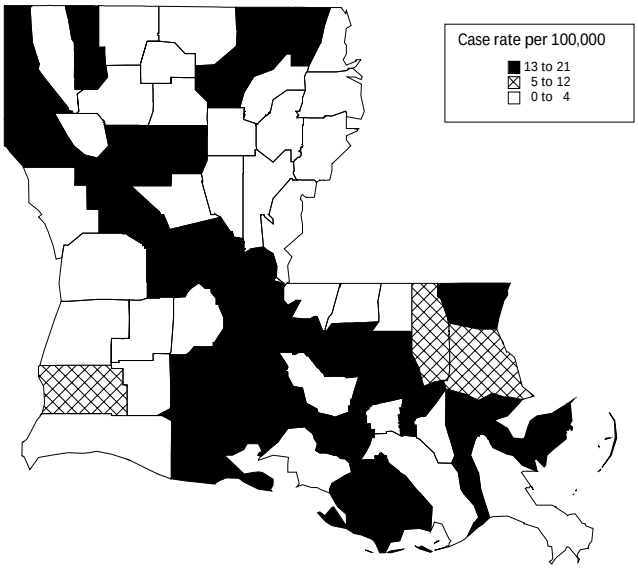


Figure 3: Rates of shigellosis by parish, Louisiana, 1999



Louisiana Fact

During the 1930's morbidity remained high for several diseases. Formidable figures frequently were reported for influenza, measles, pneumonia, scarlet fever, and whooping cough. Somewhat less common, but characterized by many cases per year, were other dangerous diseases: smallpox, polio, rabies, pellagra, and hookworm. The decline in the incidence of smallpox and hookworm were salient victories for health officials throughout the state. The number of cancer cases and cancer deaths was staggering during the 1930's, but the mysteries surrounding this disease permitted little optimism for early abatement. Cancer was added to the list of reportable diseases in 1929.

Source: The Progressive Years, by Gordon E. Gillson.

LIST OF REPORTABLE DISEASES/CONDITIONS

REPORTABLE DISEASES

Acquired Immune Deficiency Syndrome (AIDS)
Amebiasis
Arthropod-borne encephalitis (Specify type)
Blastomycosis
Botulism[1]
Campylobacteriosis
Chancroid[2]
Chlamydial infection[2]
Cholera[1]
Cryptosporidiosis
Diphtheria
Enterococcus (infection; resistant to vancomycin)
Escherichia coli 0157:H7 infection
Gonorrhea[2]
Haemophilus influenzae infection[1]
Hemolytic-Uremic Syndrome
Hepatitis, Acute (A, B, C, Other)
Hepatitis B carriage in pregnancy
Herpes (neonatal)
Human Immunodeficiency Virus (HIV) infection[3]
Legionellosis
Lyme Disease
Lymphogranuloma venereum[2]
Malaria
Measles (rubeola)[1]
Meningitis, other bacterial or fungal
Mumps
Mycobacteriosis, atypical[4]
Neisseria meningitidis infection[1]
Pertussis
Rabies (animal & man)
Rocky Mountain Spotted Fever (RMSF)
Rubella (German measles)
Rubella (congenital syndrome)
Salmonellosis
Shigellosis
Staphylococcus aureus (infection; resistant to methicillin/ oxacillin or vancomycin)
Streptococcus pneumoniae (infection; resistant to penicillin)
Syphilis[2]
Tetanus
Tuberculosis[4]
Typhoid fever
Varicella (chickenpox)
Vibrio infections (excluding cholera)[1]

OTHER REPORTABLE CONDITIONS

Cancer
Complications of abortion
Congenital hypothyroidism*
Severe traumatic head injury**
Galactosemia*
Hemophilia*
Lead Poisoning
Phenylketonuria*
Reye's Syndrome
Severe under nutrition (severe anemia, failure to thrive)
Sickle cell disease (newborns)*
Spinal cord injury**
Sudden infant death syndrome (SIDS)

Case reports not requiring special reporting instructions (see below) can be reported by Confidential Disease Case Report forms (2430), facsimile, phone reports, or electronic transmission.

[1] Report suspected cases immediately by telephone. In addition, all cases of rare or exotic communicable diseases and all outbreaks shall be reported.

[2] Report on STD-43 form. Report cases of syphilis with active lesions by telephone.

[3] Report on EPI-2430 card. Name and street address are optional but city and ZIP code must be recorded.

[4] Report on CDC 72.5 (f. 5.2431) card.

All reportable diseases and conditions other than the venereal diseases, tuberculosis and those conditions with *'s should be reported on an EPI-2430 card and forwarded to the local parish health unit or the Epidemiology Section, P.O. Box 60630, New Orleans, LA 70160, Phone: 504-568-5005 or 1-800-256-2748 or FAX: 504-568-5006.

* Report to the Louisiana Genetic Diseases Program Office by telephone (504) 568-5070 or FAX (504) 568-7722.

** Report on DDP-3 form; preliminary phone report from ER encouraged (504-568-2509). Information contained in reports required under this section shall remain confidential in accordance with the law.

Numbers for reporting communicable diseases

1-800-256-2748 Local # 568-5005 FAX # 504-568-5006

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